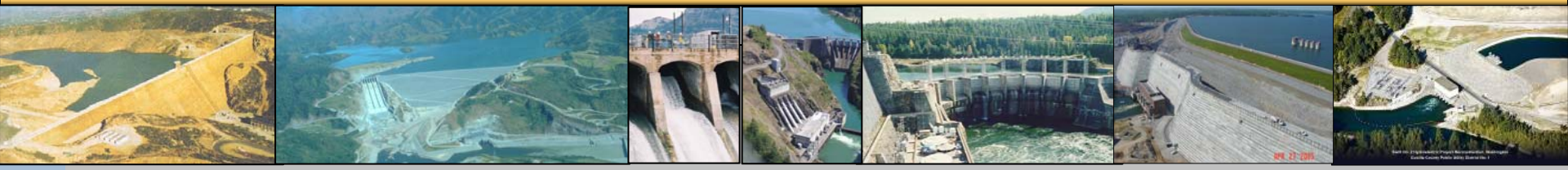
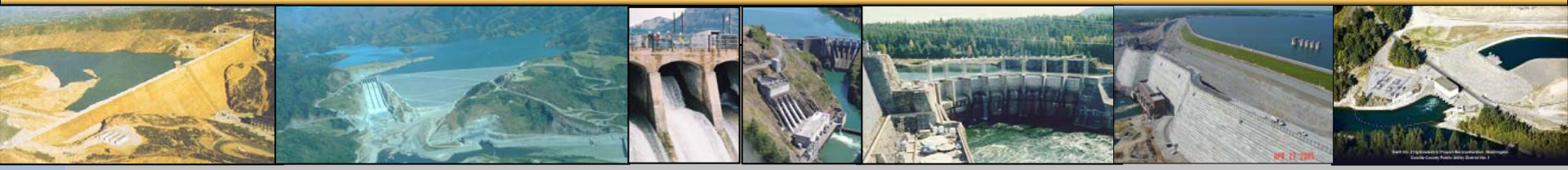
Ensuring Dam Safety in the United States



RCP GN"3

Major Components
of the
FERC Dam Safety Program

“Important Parts of a Good Dam Safety Program”

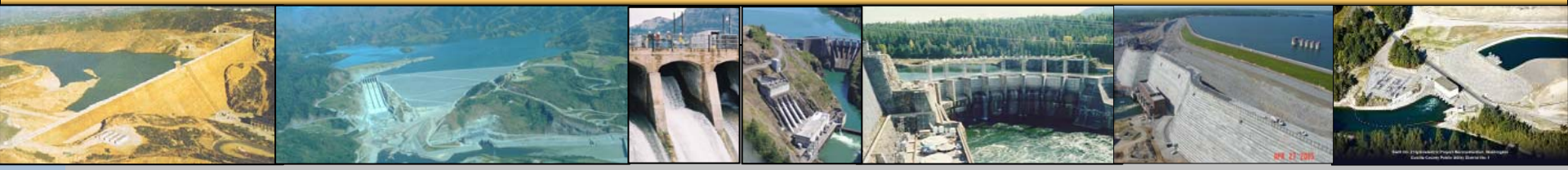


- OWNER

- DESIGNER

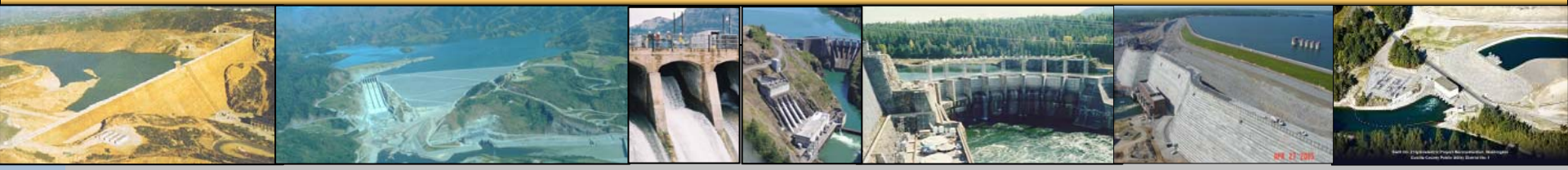
- REGULATOR

“Important Parts of a Good Dam Safety Program”



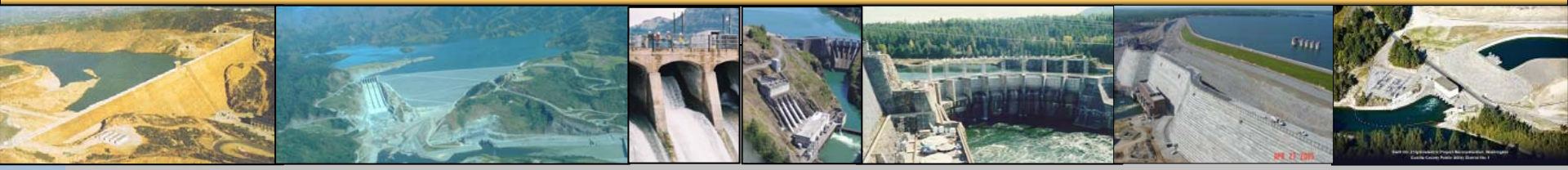
- OWNER
  - Has First Line of Responsibility
    - Owner Is the First Defense Against Dam Failures
    - Is On-Site More Than Anyone
    - Only Person to Provide Surveillance and Monitoring
    - Must Know What It Takes to Maintain a Safe Dam
    - Must Recognize an Unsafe Dam
    - Must Continually Train and Update Staff

“Important Parts of a Good Dam Safety Program”



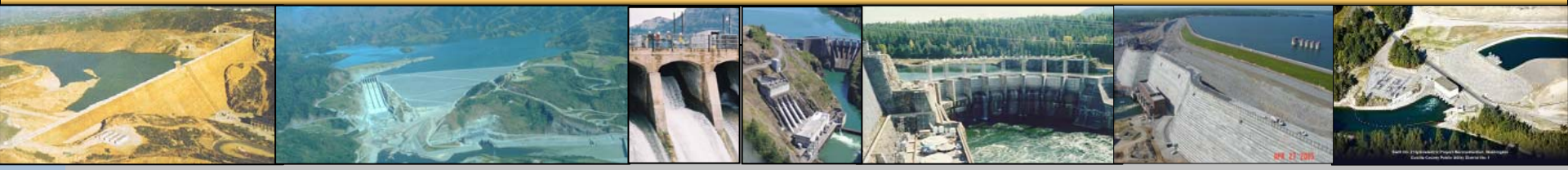
- OWNER
  - Owners Dam Safety Program (ODSP)
    - Clear Designation of Responsibility, Oversight and Authority
    - Requires Authority of All Organizational Elements
    - Access to Sufficient Technical Resources and Expertise
    - Proactive Owner Inspection and Evaluation Program
    - Adequate On-Site Presence or Remote Monitoring Capability
  - An Emergency Action Program (EAP)
    - Plan Developed in Accordance with FERC & FEMA Guidelines
    - Well Coordinated with Local Emergency Management Services

“Important Parts of a Good Dam Safety Program”



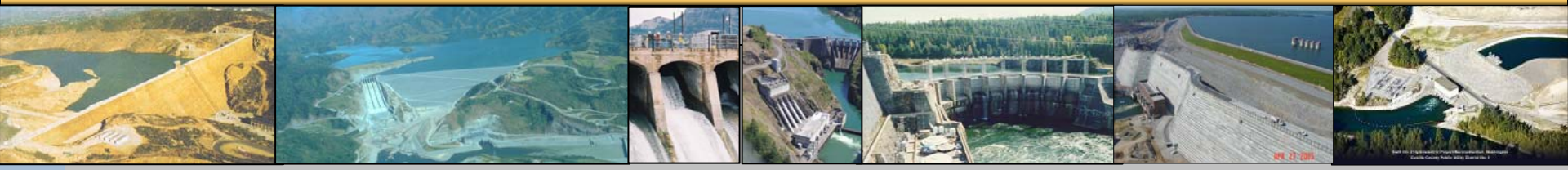
- DESIGNER
  - Responsible for Proper Design Criteria
    - Utilize FERC, COE and/or USBR Engineering Guidelines
    - Safe Design Criteria for Static and Dynamic Conditions
      - Hydrology and Hydraulics
      - Stability, Piping, and Drainage
      - Seismic Response and Deformation

“Important Parts of a Good Dam Safety Program”



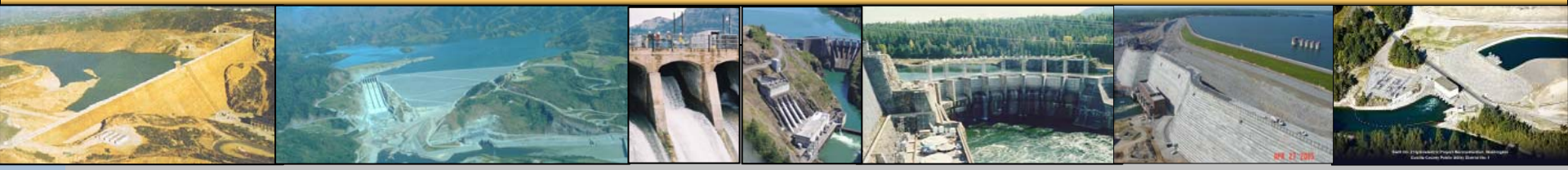
- DESIGNER
  - Develop Instrumentation and Threshold Values
    - Locations and Purpose of Instruments
    - Thresholds for Normal and Extreme Conditions
    - Instrumentation Details and Frequency of readings
  - Develop Dam Surveillance and Monitoring Plan
    - Establish Methods and Schedules for Readings
    - Develops Inspection Forms and Reporting Format

“Important Parts of a Good Dam Safety Program”



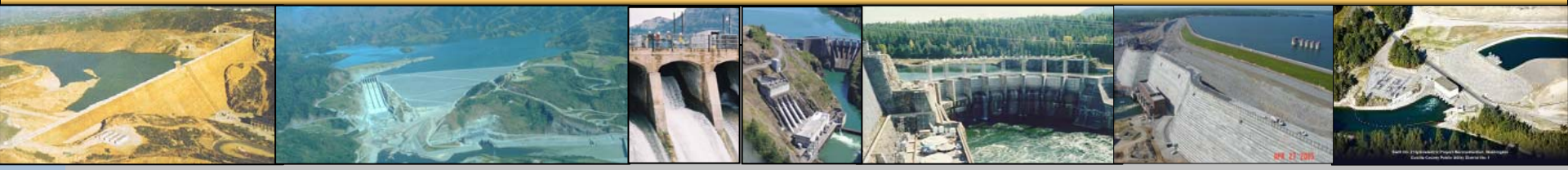
- REGULATOR
  - Establish Basic Dam Safety Guidelines
    - Engineering Guidelines for the Evaluation of Hydropower Projects
    - Establishes Dam Safety Workshops
    - Identifies Dam Safety Publications

“Important Parts of a Good Dam Safety Program”



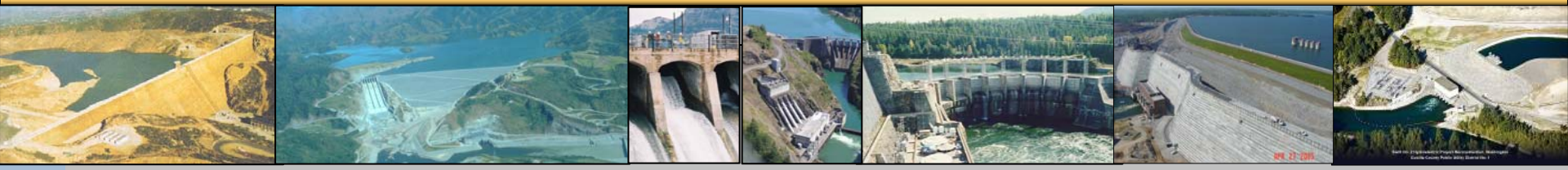
- REGULATOR
  - Maintains Periodic Inspections and Reviews Reports
    - FERC Annual Site Safety Inspections
    - FERC Part 12, Independent Consultant Inspections
    - Reviews Dam Safety Surveillance and Monitoring Reports

“Important Parts of a Good Dam Safety Program”



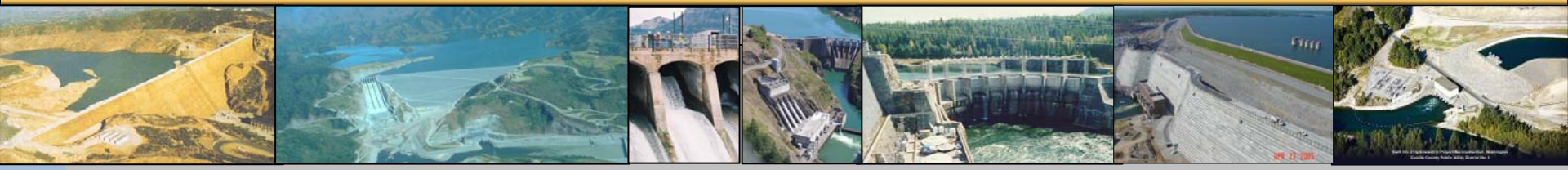
- REGULATOR
  - Enforces Dam Safety Surveillance & Monitoring
    - Works with Owner and Engineer to Develop Plan (DSSMP)
    - Reviews Dam Safety Surveillance & Monitoring Reports (DSSMR)
    - Coordinates DSSMP with Results of PFMA

“Important Parts of a Good Dam Safety Program”



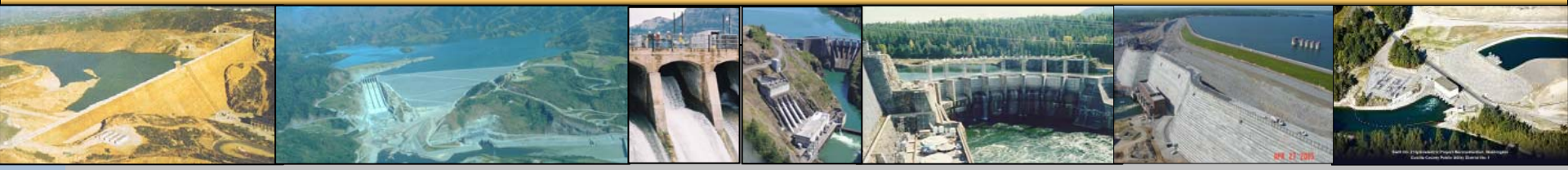
- REGULATOR
  - Enforces Potential Failure Mode Analysis (PFMA)
    - Performs PFMA on All Projects
      - New Projects During Initial Design
      - Rehab Projects During Analysis
      - Older Projects ASAP
    - Incorporates PFMA Results into Instrumentation & Monitoring

“Important Parts of a Good Dam Safety Program”



- REGULATOR
  - Maintains Close Coordination with Dam Owners
  - Provides Dam Safety Guidelines for Designers
  - Monitors Dam Safety Processes:
    - Owners Dam Safety Program (ODSP)
    - Part 12 Consultant Safety Reports
    - Dam safety Surveillance & Monitoring Reports (DSSMP)
    - Potential Failure Mode Analysis (PFMA)
    - Emergency Action Plans (EAP)

“Important Parts of a Good Dam Safety Program”



So There You Have:

The Important Parts of
a Good Dam Safety Program!

QUESTIONS?